Jan. 10, 1956 J. T. LYNES 2,730,290

CONTAINER AND DISPENSER

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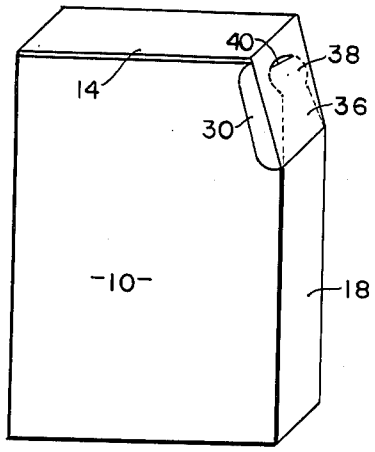


FIG. 1

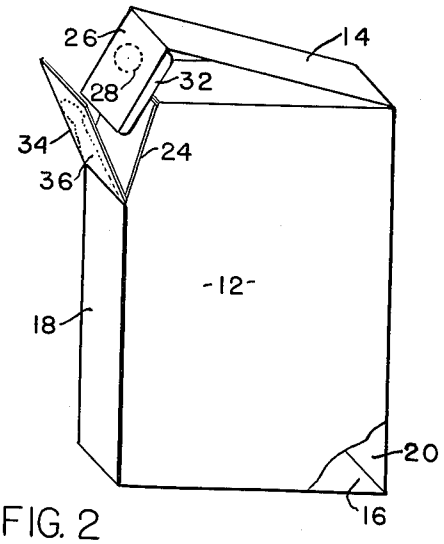


FIG. 2

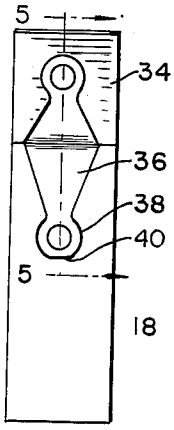


FIG. 3

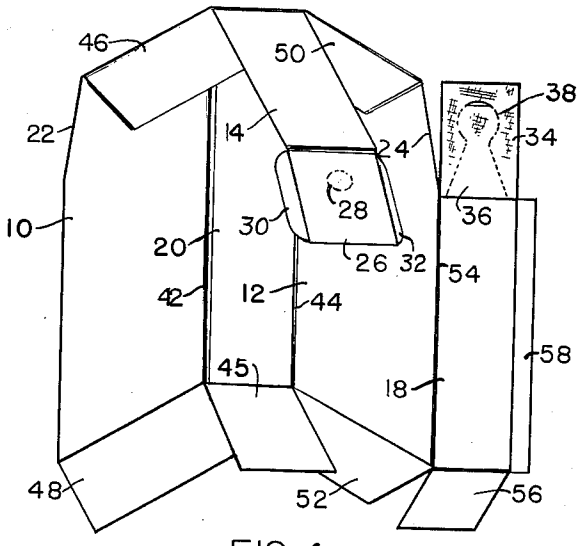


FIG. 4

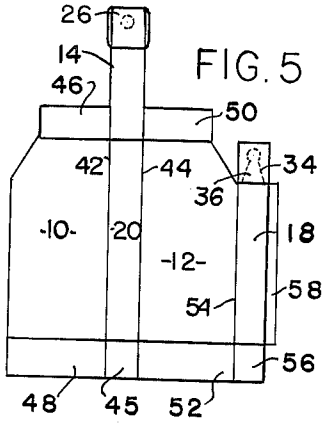


FIG. 5

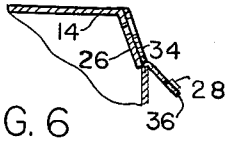


FIG. 6

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CONTAINER AND DISPENSER

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5 Claims. (Cl. 229—17)

This invention relates to a container and dispenser and more particularly to a type of box or carton used in the packaging, storing and dispensing of goods.

One type of conventional container for soaps, baby cereals, and the like is a generally rectangular box with a perforated tab on the top or side thereof. In opening the box the tab is punched out leaving an opening directly into the container and the contents therein. Once the tab is punched it will not refit flush and therefore the contents are somewhat exposed. The present invention provides a tab or tongue with fitted insert or plug in a particular arrangement of a better closure. In addition, such conventional containers have an unsatisfactory arrangement for dispensing which arrangement is improved upon by the present invention.

A particular object of this invention is to improve over those cartons or packages which merely provide a partially uncovered punched opening directly into the contents of the container when after puncturing the tab the interior of the container is at least partially exposed permitting foreign ingredients such as dirt and bugs to enter into the remainder of the contents. The container of the present invention provides a novel blank from which the package is constructed as well as a new and different dispenser arrangement.

An additional object of the present invention resides in the formation of an angularly disposed pouring area whereby greater control of the contents is maintained during pouring and a greater volume is available in less time.

A further feature resides in the construction of the entire container from a manufacturing and fabrication point of view and in the strength and rigidity inherent from the novel construction.

Another advantage of the instant invention is found in the tight closure which is readily positioned after dispensing and in the simplicity of formation of the closure lending the structure to inexpensive manufacture.

Briefly described, the present invention comprises a normally closed container having top, bottom, side, and end walls, with the top wall having an opening formed therein and with one of the other of said walls having a tongue formed thereon, said tongue having a plug fixed thereon so that movement of the tongue carries the plug from the opening. As one preferred form of manufacture, the walls are formed by bending along fold lines on a flat blank and the plug and tongue are formed separately by partial cutting on the flat surface. When folded in place in a particular manner the various parts readily assume their positions. In addition, one corner of each of the opposed side walls may be angularly cut to provide an angular support on the corner of the container for the plug and tongue thereby providing a better pouring area. Of course, the individual features may be formed from other than a flat blank.

Other and further objects and advantages will be apparent from the following description taken in conjunction with the accompanying drawings in which:

Fig. 1 is a pictorial view of the container prior to opening with the dispenser in initial fixed position.

Fig. 2 is another pictorial view with parts of the container moved out of normal position for an illustration.

Fig. 3 is a front end elevation view of the device of Fig. 1, with the tongue broken out of position.

Fig. 4 is an elevation view illustrating the blank from which the container may be formed as well as illustrating an intermediate stage of folding.

Fig. 5 is a plan view of the flat blank from which the container may be formed.

Fig. 6 is a section view taken along lines 5—5 of Fig. 3.

Referring to the drawings and initially Figs. 1 to 4, inclusive, thereof, for a description of the assembled container comprising side walls **10** and **12**, a top wall **14**, a bottom wall **16**, a front end wall **18**, a rear end wall **20** forming a normally closed, substantially rectangular container.

The opposed side walls, **10** and **12**, are angularly cut across the respective upper corners **22, 24** thereof forming an angularly disposed surface at one corner of the container. The top wall **14** extends adjacent the angled corner into a base flap **26** which bends out of the plane of the top **14** assuming the angle of the corner and lying across the opposed edges **22, 24** of the sides **10, 12**. Prior to opening the container, the base flap **26** has a plug **28** perforated or otherwise partially cut thereon and being retained in place by only a slight junction with the base flap **26** so that a slight pull will remove the plug from the base flap **26** leaving a complementary opening. In addition, base flap **26** is provided with side tabs **30, 32** glued or otherwise fixed to a respective side **10, 12** to anchor the base flap **26** firmly in place.

The end wall **18** extends at the top thereof to form an outer flap **34** which bends out of the plane of the end wall **18** to become coextensive with and lie on top of the base flap **26**. With this arrangement, there are two plies of material at the angled corner. The outer flap **34** has a tongue **36** perforated or partially cut thereon so that, in manner similar to the plug **28**, a slight pull on the tongue **36** will remove it from the outer flap **34** leaving a contoured, complementary opening. Tongue **36** includes a circular portion **38** at the upper end thereof and to assist in the removal of tongue **36** the portion **38** has been cut across at the top **40** leaving a fingernail slot. With the base flap **26** fixed on opposed sides **10, 12** the outer flap **34** is glued or otherwise fixed to the base flap **26** with the exception of the tongue **36** which is free to pivot.

The partially unfolded container of Fig. 4 illustrates the manner of forming the closed container from the flat blank shown in Fig. 5. By referring to the blank of Fig. 5 thence to the other figures it will be clear how one preferred embodiment of the invention is constructed and assembled. Side walls **10, 12** are formed to fold about respective fold lines **42, 44** leaving one end (the rear) **20** therebetween. End **20** extends at the top to form top flap **14** and top flap **14** extends further to form base flap **26**. End **20** in turn extends at the bottom to form a bottom closure tab **45**. Side wall **10** extends to form top and bottom closure tabs **46, 48**, respectively, and side wall **12** extends in like manner to form top and bottom closure tabs **50, 52**. End wall **18** is a continuation of the side of side wall **12** being formed about a fold line **54**. The top of end wall **18** extends to form the outer flap **34** while the bottom extends to form a bottom closure tab **56**. End wall **18** also extends at its side to form a sealing tab **58**. The blank is stamped or cut from a flat sheet of material and either during or after the stamping, the plug **28** is partially cut on base flap **26** and the tongue is partially cut on the outer flap **34**.

Bringing the various parts together about their fold lines in the manner of Fig. 4, it is seen that the top closure tabs **46, 50** overlap and the top flap **14** extends over both of them where it is glued in place. In like manner, the bottom closure tabs **48, 52** overlap from the sides forming the exposed bottom while the bottom closure tabs **45, 56** overlap from the ends forming the inner bottom. Sealing tab **58** folds inside at the marginal edge of the intersection of side **10** and end **18** and is glued or otherwise fixed in place to seal the edge and hold end **18** in place. Base flap **26** is, as mentioned heretofore, folded in position against the angled edges of sides **10, 12** at **22, 24**, respectively, and tabs **30, 32** are folded and glued in place on a respective side **10, 12**. Prior to the positioning of the outer flap **34**, some bonding material such as glue is spread outside the confines of tongue **36**, approximately as shown in the hatched lines of Fig. 4, and a small dab is placed on the circular portion **38**. When the outer flap **34** is pressed in place on top of base flap **26**, the pouring area defined on this angular surface is sealed and the tongue becomes fixed to the plug **28**. Bending the tongue **36** out of its normal position, which is flush with the outer flap **34**, breaks the plug **28** from the base flap **26** and leaves a complementary opening through which the contents of the container may be poured.

In preparing the containers for filling, as where the containers would be formed and assembled in one place then shipped to another for filling, all the sealing of the sides and edges may be completed except for the positioning and sealing of the base flap **26** and the outer flap **34** which may be left open and temporarily pulled back leaving an enlarged opening at the angular corner for filling. In shipping, the container may be collapsed in the above condition until ready for expanding and filling under the machines. After filling, the base flap **26** and the outer flap **34** are sealed or glued or otherwise fixed in position tightly sealing the contents in until the tongue **36** is broken out of position.

Once the seal is broken on the tongue **36** and only a part of the contents has been used, it is, of course, desirable to re-seal the container to protect the stored contents until again needed. Such re-sealing is particularly easy and effective with the present invention since the tongue **36** and plug **28** are easily forced back into their complementary openings and pressure on the circular portion **38** of the tongue **36** against the base flap **26** will reseat the plug tightly closing its opening while at the same time the tongue becomes firmly engaged in its opening and flush with the outer flap **34**. The base flap **26** provides a surface underneath the tongue **36** against which the tongue may be seated as well as providing a stop to prevent the tongue from being formed all the way inside the container.

Since the circular portion **38** of tongue **36** is larger than the plug **28**, the periphery of the plug opening is sealed when the tongue **36** and plug **28** are in closed position. This provides a double seal to the pouring area and assures protection from foreign ingredients entering the container in storage. In addition, the double seal enhanced by the tight fit of the contoured tongue with its complementary opening provides a strong engagement of the closure parts and accidental openings as by knocking over or dropping are greatly reduced.

The angular pouring section formed by the surfaces **22, 24** and flaps **26, 34** greatly facilitates the speed and control of the contents emitting from the container. Since there is no sharp corner at this point part of the contents does not back up in the corner and block the emission of the rest of the contents. Tilting the container to the point where the outer flap **34** is horizontal brings the contents squarely against a flat surface on all sides of the opening thereby assuring a steady flow. Better control is available when an immediate cessation of pouring is desired since a slight tilt back to normal upright position brings the contents against a now backwardly inclined surface at **26** practically eliminating the unwanted last surge of contents which is present when using containers with a pouring surface formed on one of the flap sides.

Although for the purpose of illustration and in the interest of clarity, a preferred form of the container and blank has been shown and described in detail this is not to be construed as a limitation on the coverage of the invention as various modifications, changes, substitutions, alterations, and eliminations may be made within the scope of invention and without departing from the appended claims.

I claim:

1. In an article operable to form a normally closed container formed from sheet material and comprising opposed top and bottom, opposed side and opposed end walls sealed at their intersecting edges, a base flap formed about a hinge line on said top wall as an extension thereof, a plug on said base flap defined by partial cutting thereon, said base flap being immovable on said container and said plug being readily removable under slight pressure, said side walls being angularly cut across a respective corner thereof forming an inclined surface at the edge of the container with said base flap fixed thereto and acting as a closure therefor, a tongue defined on said container and being movable about a hinge line formed on a portion thereof, and means bonding a portion of said tongue to said plug, said bonding means being discontinuous about most of said tongue thereby permitting said tongue to pivot out of its normal plane on said container, whereby initially said box is sealed by said plug and the bending of said tongue out of plane carries the plug with it temporarily forming an opening in said box which is re-sealed upon reseating said tongue and plug.

2. In an article operable to form a normally closed container comprising, opposed flat side walls, opposed flat end walls, and opposed top and bottom walls with all intersecting corners thereof sealable to form a container having squared, perpendicular intersections on three corners thereof, said side walls being in opposed relationship and having the fourth corner thereof diagonally cut in alignment forming an angular support surface on the fourth corner of said container, at least one of said walls having extended portion thereof foldable about a hinge line thereof to extend across and rest on said angularly cut corners to attach thereto forming a closure therefor and providing another flat surface on said container which surface is smaller than the others, and a partially cut tongue on said closure adapted to be bent from its normal closed position leaving an opening at said angularly formed corner into the interior of said container, by virtue of all of which when tilting said container for pouring said angularly formed corner acts as a pouring area against the inside of which the contents of said container will naturally be directed thereby assisting a steady flow through said opening.

3. In an article operable to form a normally closed container formed from sheet material and comprising opposed top and bottom, opposed side and opposed end walls sealed at their intersecting edges, a base flap formed about a hinge line on said top wall as an extension thereof, means for securing said base flap to respective side walls, a plug defined as a removable portion of said base flap, said side wall being angularly cut across respective corners thereof forming opposed inclined surfaces supporting said base flap at one corner of said container, an outer flap formed about a hinge line as an extension of one of said walls adjacent the inclined surface and being adapted in normal position to overlap said base flap, a tongue on said outer flap defined by partial cutting thereof and being movable about a hinge line formed on a portion thereof, and bonding means securing said outer flap to said inner flap and securing a part of said tongue to said plug, said bonding means being discontinuous about most of said tongue thereby permitting said tongue to pivot out of confinement in said outer flap, whereby initially said container is sealed by said plug and said

plug is removed by the action of moving said tongue out of its plane and being thereafter re-insertable in the opening.

4. In an article of manufacture being a flat blank for bending to form a container, a center section having a first fold line at the upper end thereof and extending beyond said fold line to form a top flap, said top flap having a fold line thereon with a base flap extending therefrom, said base flap having a plug partially cut thereon, opposed side walls foldable about respective spaced fold lines on said center section and having upper, outer edges thereof cut at an angle so that when folded the sides are in opposed relationship forming an angular base for said base flap, said base flap and said angularly disposed sides forming a pouring section, a flap foldable from a portion of said blank and extending at the upper end thereof to form a tongue, said tongue in normal position when folded being adapted to overlie the base flap to complete said angularly disposed pouring section, said tongue having a portion thereof overlying said plug so that it may be attached thereto whereby movement of said tongue carries said plug out of position.

5. In an article of manufacture being a flat blank for bending about fold lines to form a container, a center section having a first fold line at the upper end thereof and extending beyond said fold line to form a top flap, said top flap having a fold line thereon with a base flap extending therefrom, said base flap having a plug partially cut thereon, opposed side members foldable about said center section and having upper, outer edges thereof cut at an angle so that when folded the side members are in opposed relationship forming an angularly disposed base for said base flap, said base flap and said angularly disposed sides forming a pouring section, an end wall foldable about a fold line defined on one side of one of said side members and extending at the upper end thereof for folding to form an outer flap, said outer flap in folded position being adapted to overlie said base flap to complete said angularly disposed pouring section, and a tongue partially cut on said outer flap, said tongue having a hinge line for bending out of its normal plane and having a portion thereof contacting said plug in folded, closed position.

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